

FIG. 1

RECONFIGURABLE MUX/DEMUX TO ENABLE WAVELENGTH INDEPENDENT TRANSPONDER SLOTS THAT CAN BE WIRED WITH FIXED OPTICAL CONNECTIONS AND SEND/RECEIVE ANY  $\lambda$

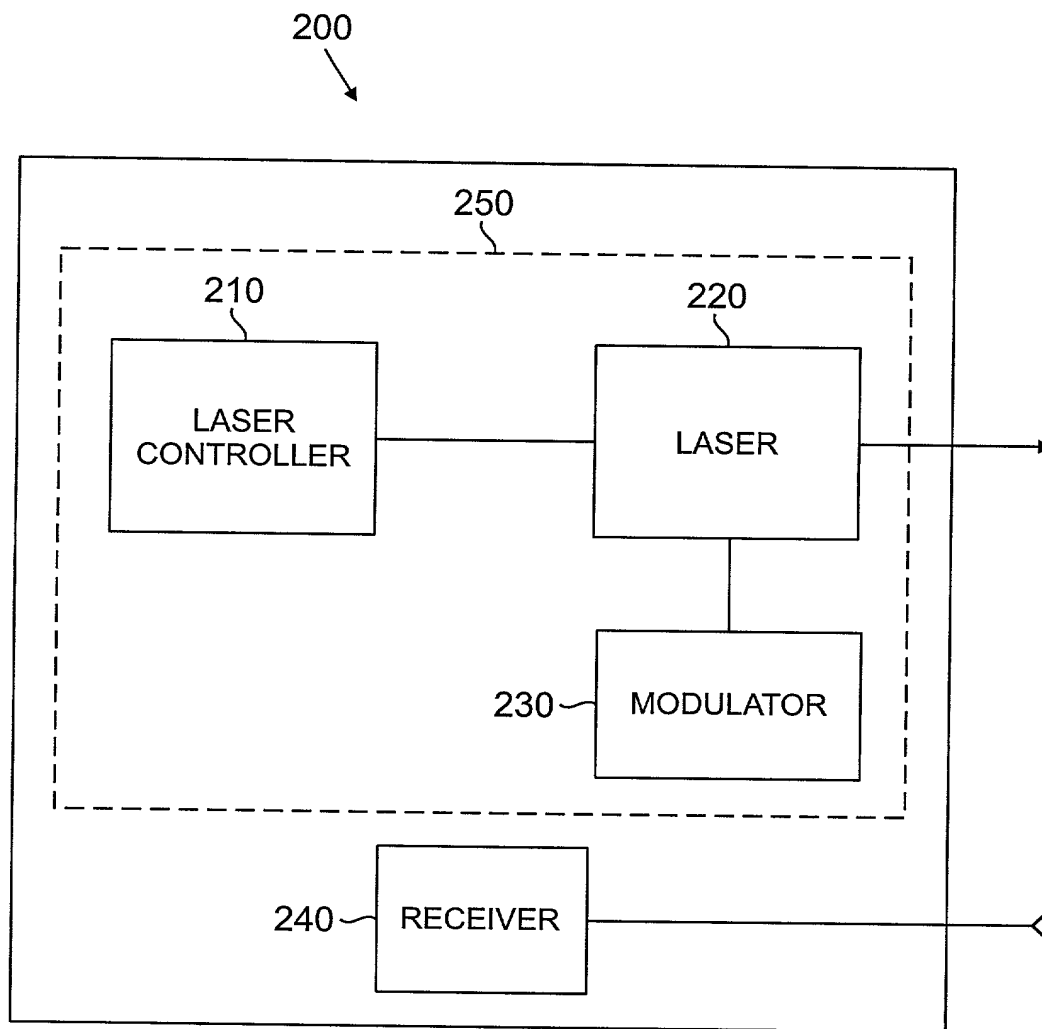
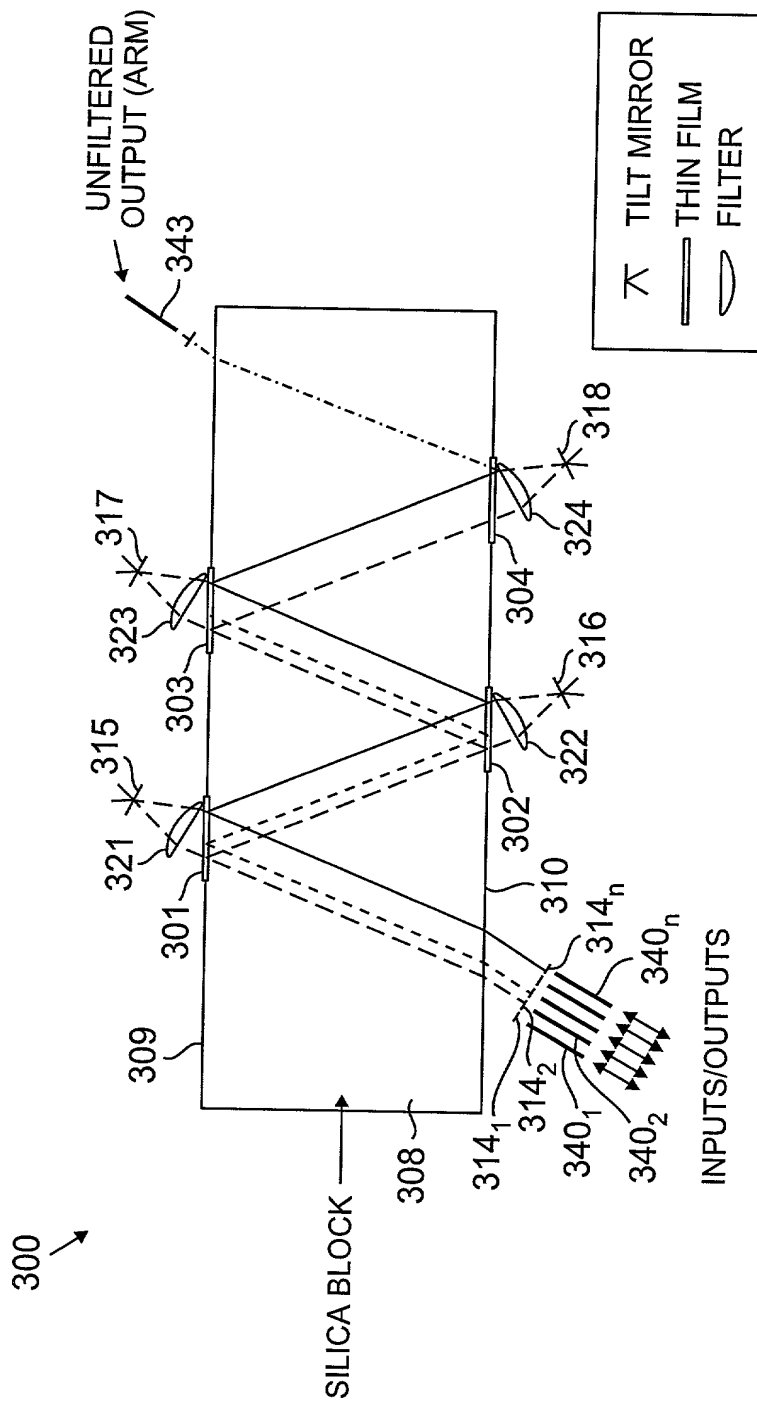
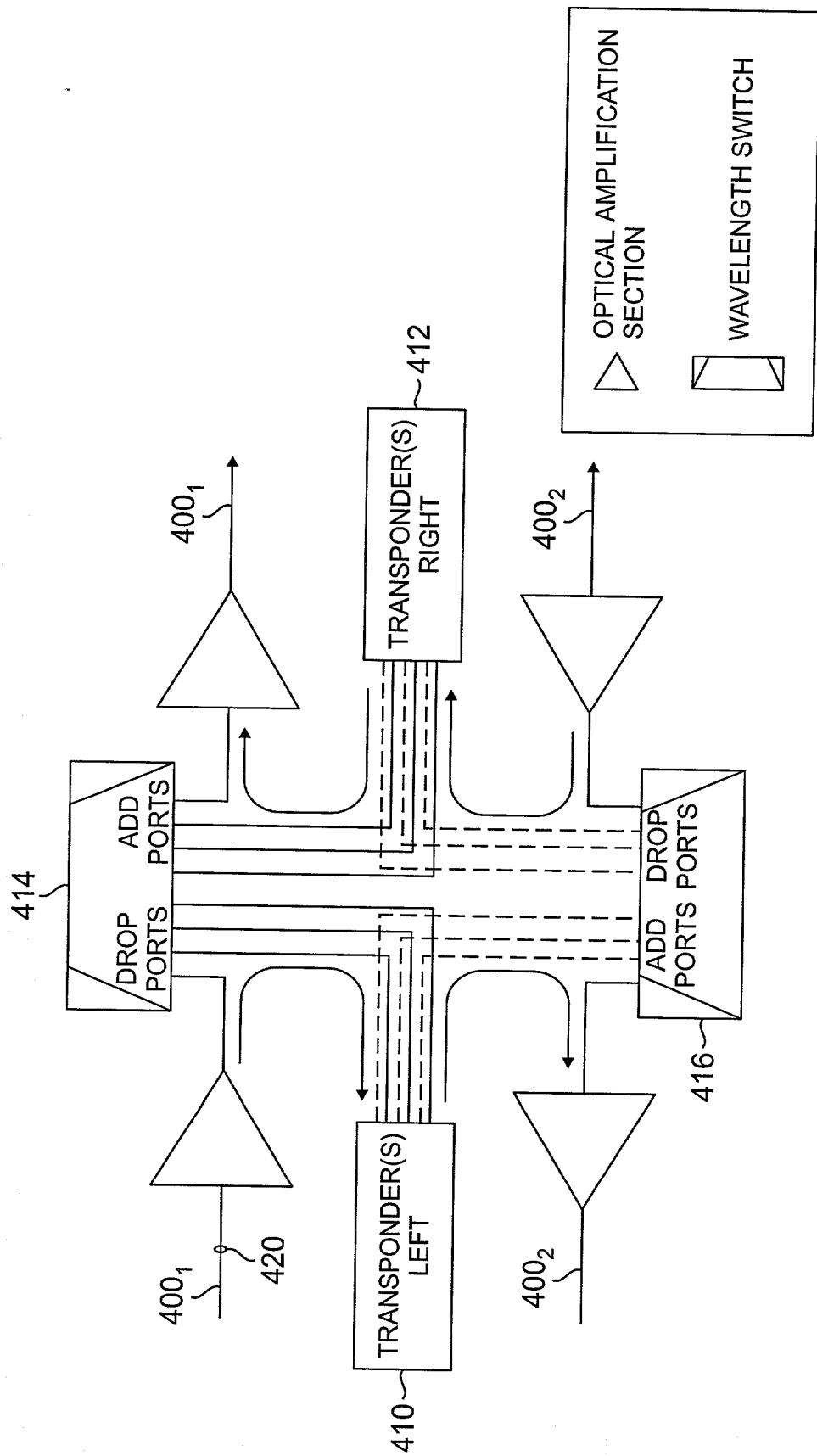


FIG. 2



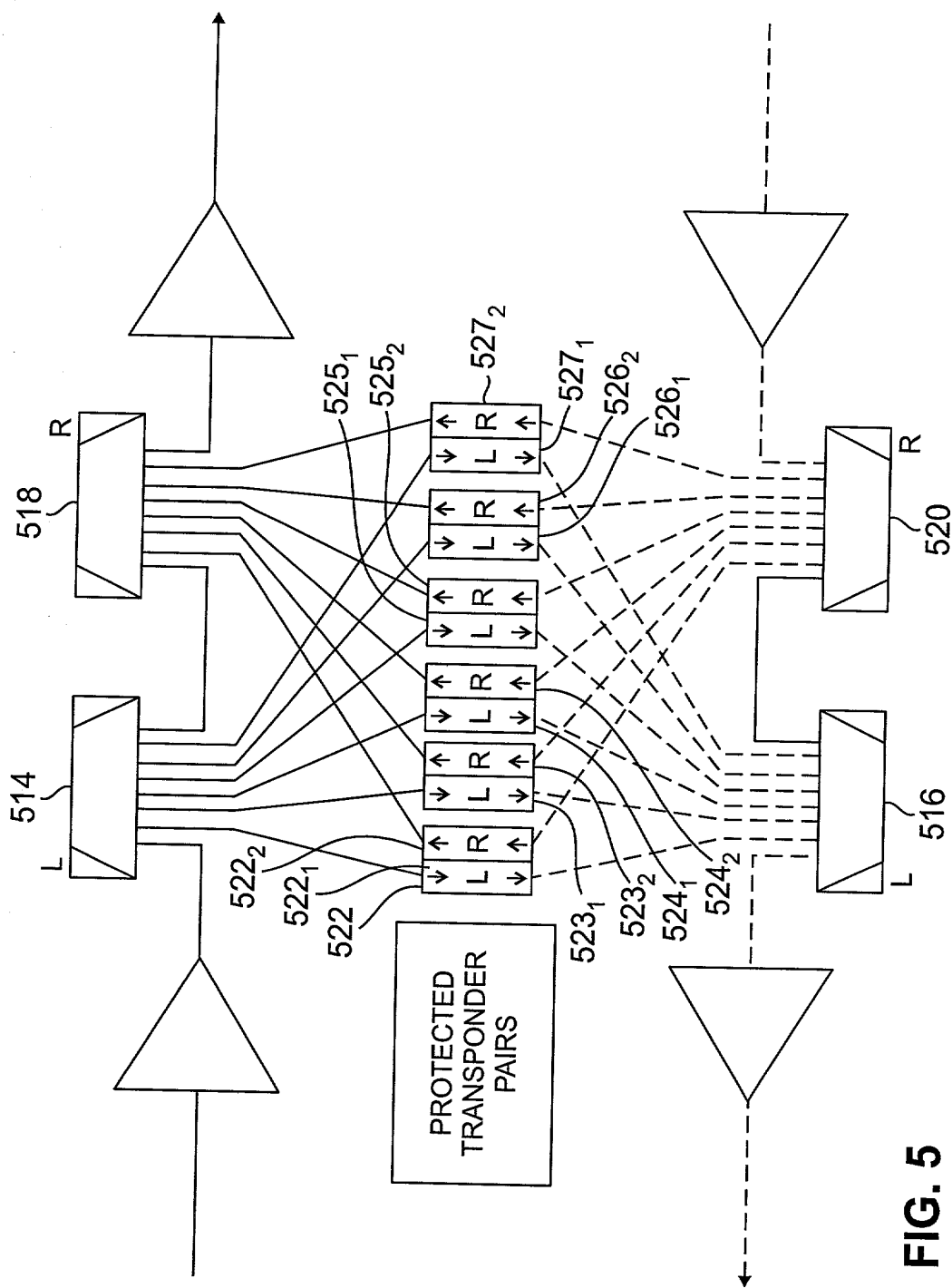
BIDIRECTIONAL INPUTS/OUTPUTS WITH  
INDEPENDENT WAVELENGTH DISTRIBUTION

FIG. 3



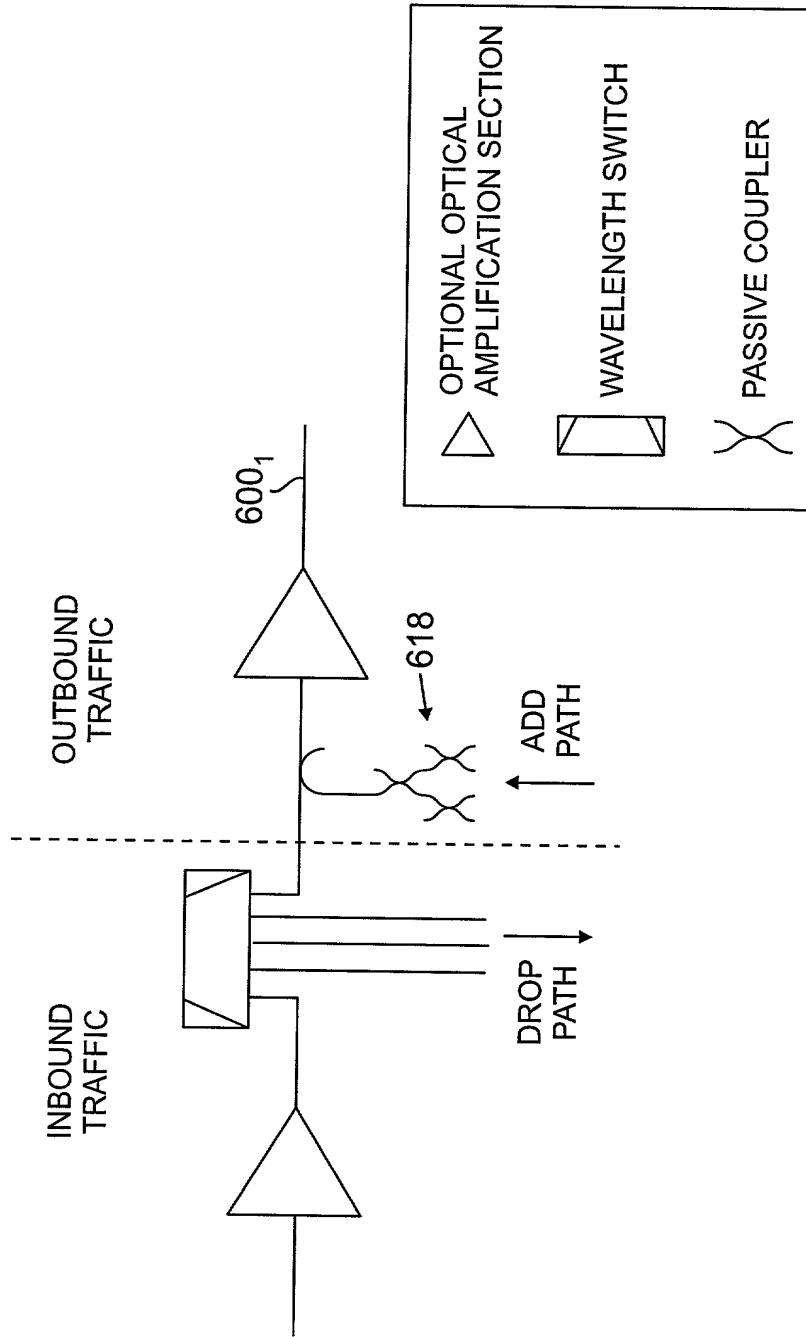
MID-AMPLIFIER SWITCH TO ADD/DROP CHANNELS TO SEPARATE SERVICE PATHS ON A UNIDIRECTIONAL FIBER PAIR SYSTEM

FIG. 4



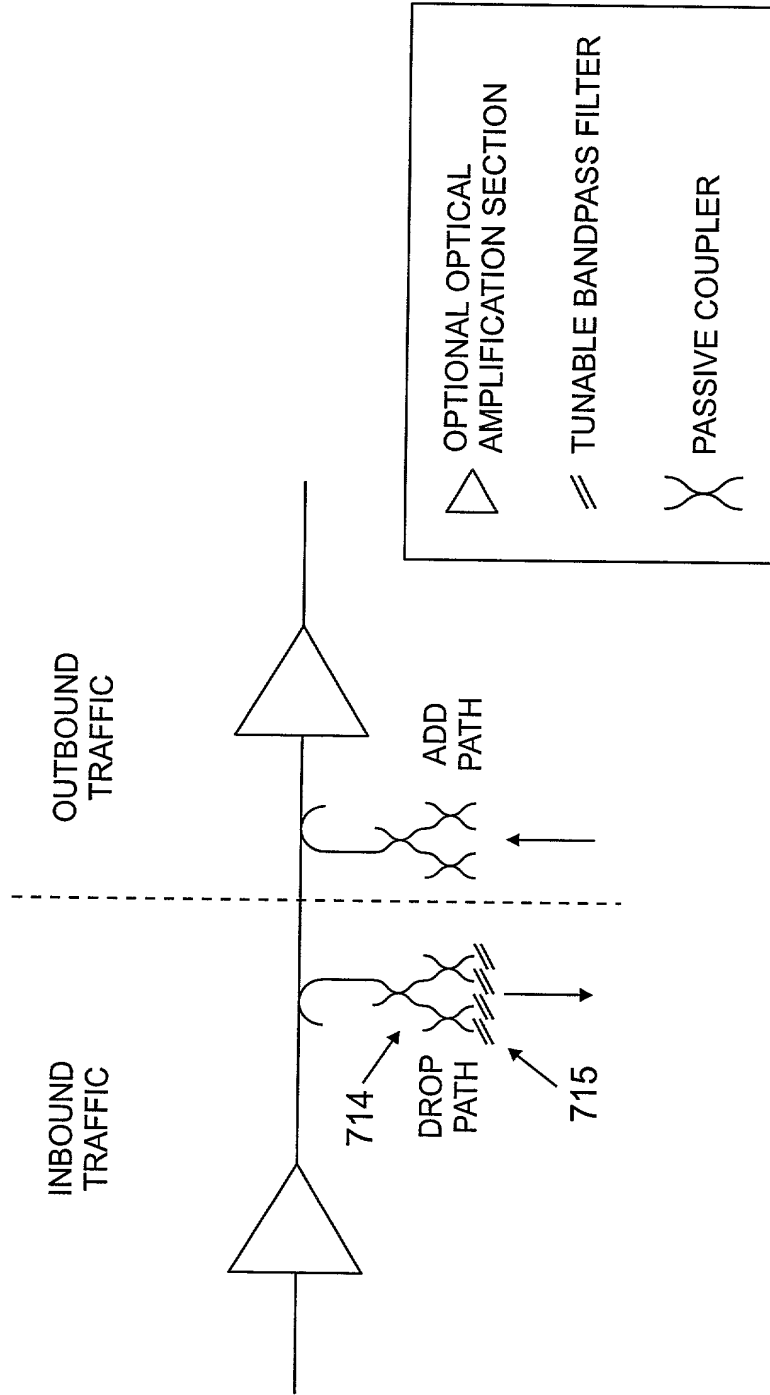
SWITCHING SYSTEM TO ADD/DROP SIGNALS WITH  
INDEPENDENT NODE PATHS (LINK AND NODE DISJOINT)

FIG. 5



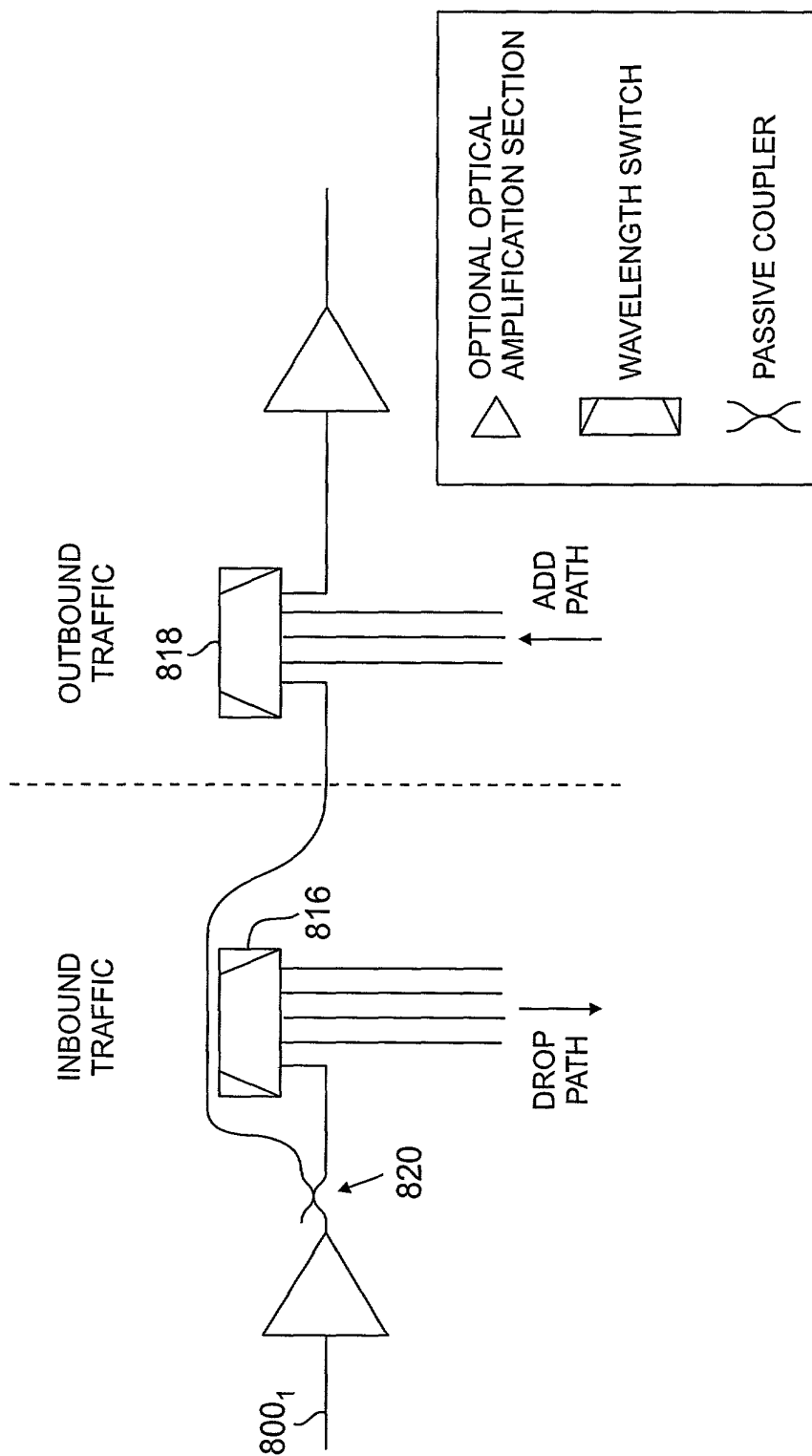
MID-AMPLIFIER SWITCH TO ADD/DROP WITH DISJOINT NODE PATHS  
USING A LOW COST PASSIVE COUPLER TO ADD SIGNALS

**FIG. 6**



INEXPENSIVE ADD/DROP WITH LINK NODE DISJOINT PATHS  
WITHOUT WAVELENGTH REUSE DUE TO NO WAVELENGTH BLOCKING  
(ENABLES DROP AND CONTINUE OF SIGNAL)

FIG. 7



MID-AMPLIFIER SWITCHING SYSTEM WITH PER WAVELENGTH ADD/DROP,  
DROP AND CONTINUE SIGNALS WITH INDEPENDENT EAST/WEST NODE PATHS  
(WITH OPTIONAL WAVELENGTH BLOCKING)

FIG. 8